

IN THE CLAIMS:

Cancel claims 76, 92 and 94

Add the following new claims:

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95. A stent for holding open a blood vessel comprising:
a first loop containing section, the first loop containing section arranged generally in the circumferential direction, the loops in said first loop containing section occurring at a first frequency;
a second loop containing section, the second loop containing section arranged generally in the circumferential direction, the loops in said second loop containing section also occurring at said first frequency; and
a third loop containing section the third loop containing section, the loops in said third loop containing section occurring at a second frequency that is higher than said first frequency, disposed in the generally circumferential space between said first and second loop containing sections and alternately joined to said first and second loop containing sections.
96. A stent according to claim 95, wherein the first loop and second loop containing sections are relatively adapted to enable radial support and the third loop containing section is relatively adapted to enable longitudinal flexibility.
97. A stent according to claim 95, wherein the first loop and second containing sections have wider struts than the third loop containing section.
98. A stent according to claim 95, wherein the first and second loop containing sections have two loops for every three loops of said third loop containing section.
99. A stent according to claim 95, wherein the higher frequency elements provide improved flexibility.
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100. A stent according to claim 99, wherein, while flexing, the higher frequency elements have lower maximal strain of the expanded stent within a blood vessel caused by a pulsing of blood.

101. A stent according to any of claim 95, wherein the first and second loop containing sections are 180 degrees out of phase with each other.

102. A stent according to any of claim 101, wherein the first and second loop containing sections are joined to said third loop containing sections such as to form a plurality of cells, each of which include two loops of one of said first or second loop containing sections and three loops of said third loop containing section.

103. A stent according to claim 95, wherein the stent is made of stainless steel.

104. A stent according to claims 95, wherein substantially each cell in the stent encompasses the same area.

105. A stent according to claims 95, wherein the cell is arranged so that when expanded a length of the cell along a circumference of the stent is longer than a length of a cell along the longitudinal axis of the stent.

106. A stent according to claims 95, wherein the stent is made from NiTi.

107. A stent according to claim 106, wherein a cell of the stent is symmetrical about a line parallel to a longitudinal axis of the stent.

108. A stent for widening a vessel in the human body comprising:
a plurality of first circumferential bands containing a pattern of loops at a first frequency;

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a plurality of second circumferential bands containing a pattern of loops at a second frequency higher than said first frequency, alternating with said first circumferential bands and periodically coupled thereto to form cells.

109. A stent according to claim 108 wherein the first circumferential bands containing a pattern of loops are comprised of

even first circumferential bands containing a pattern of loops; and

odd first circumferential bands containing a pattern of loops which are 180° out of phase with the loops of the even first circumferential bands, an odd first circumferential band occurring between every two even first circumferential bands.

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110. A stent according to claim 108, wherein each cell includes two loops of one of said plurality of first circumferential bands and three loops of one of said plurality of second circumferential bands.

111. A stent according to claim 108, wherein each cell includes a number of loops of said first circumferential band corresponding to two cycles of said first frequency and a number of loops of said second circumferential band corresponding to three cycles of said second frequency.

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112. A stent according to claim 108, wherein the first circumferential bands have loops that are wider than the loops in said second circumferential bands.

113. A stent according to claim 112, wherein the higher frequency of the loops in said second circumferential bands provide improved flexibility.

114. A stent according to claim 113, wherein, while flexing, elements in the higher frequency loops have lower maximal strain.

115. A stent according to claim 114, wherein, said stent is made of stainless steel.